

head Lake, Maine, July 14 and 19, 1907 (C. W. Johnson), in the collection of the Boston Society of Natural History.

Paratypes, Princeton, Maine, July 12, 1909; Franconia, New Hampshire (Mrs. A. T. Slosson); White Mountains, near Glen House (Dr. Geo. Dimmock); Ricketts, North Mt., Pennsylvania, June 8, 1898 (C. W. J.).

Readily separated from *B. badia* by its less prominent antennal process, the black middle and posterior femora, and the large yellow triangular markings on the third abdominal segment, especially in the male. It is a species belonging to the Canadian zone, while *B. badia* practically belongs to the transition zone and is only occasionally taken in areas frequented by a few species found in both zones.

Thirteen specimens of *B. badia* show the following distribution: Northeast Harbor, Maine, July 19, 1909 (Dr. C. S. Minot); Franconia, New Hampshire (Mrs. Slosson); Manchester, Vermont, June 9; Auburndale, June 15, North Adams, June 14, and Mt. Everett, Massachusetts, June 28; Darien, Conn., June 10; Philadelphia, June 30; Edge Hill, June 5, and North Mt., Pennsylvania, June 8 (C. W. J.).

The First Fossil Anthomyid Fly from Florissant (Dipt.).

By T. D. A. COCKERELL, Boulder, Colorado.

Anthomyia (sens. lat.) *atavella* n. sp.

Length nearly 6 mm., of wing 4.25; robust, bristly; the head, thorax and legs were apparently black; the abdomen as preserved is warm reddish, with the sutures pallid, it was probably brown; wings perfectly clear, veins dark. Top of head with large bristles directed forward, as in *Lispa uliginosa*; palpi about 480 μ long and 80 broad near end, feebly clavate, with bristles not longer than diameter of palpus (these palpi are essentially as in *Hyetodesia leucorum*); thorax elevated, scutellum prominent, dorsal thoracic macrochaetae very large, one near base of wing over 640 μ long, the long bristles and short hairs apparently practically as in *Hyetodesia*, but the precise arrangement cannot be made out; four very large macrochaetae can be seen in the longitudinal subdorsal row, before the scutellum; abdomen with thinly scattered bristles, the largest in a row near the hind margins of the segments, these being about 350 μ long, the arrangement very nearly as in the Muscid *Myiospila meditabunda*; legs bristly, the hind

femora with a row of large erect bristles on the upper side as in *Hyetodesia leucorum*; costa densely beset with very short black bristles; auxiliary vein reaching costa about 1600 μ from base of wing, running close to first vein for about 1215 μ , then rapidly leaving it, but the bend not very abrupt; first vein not especially thickened, reaching costa about 480 μ beyond end of auxiliary; second vein little arched, it and the third ending as in *Lasiops spiniger*; anterior cross-vein about 830 from end of discal cell, and about 1040 from its base; outer side of discal cell quite straight; fourth vein beyond the discal cell gently arched upwards, and then near the end with a short curve downwards.

Miocene shales of Florissant, Colorado, Station 13 (W. P. Cockerell). I cannot make out the squamae, but after close study and comparisons (especially with Cordyluridae) I am satisfied that this is a genuine Anthomyiid, the first to be described from Florissant. It is hardly possible to place it in a modern restricted genus, the characters used as generic being in large part invisible.

Scudder described two flies assigned to *Anthomyia* from the tertiary strata at Quesnel, British Columbia; these may be separated from *A. atavella* as follows:

Apical side of discal cell about as long as its side on first posterior (as in *Lasiops*, *Hyetodesia*, and most modern forms) *A. burgessi* Scudd.

Apical side of discal cell much shorter than its side on first posterior (a *Scatophaga*-like characters)

1. Wing 4.25 mm. long; at level of end of discal cell, first posterior twice as wide as submarginal cell (*Hyetodesia* approaches this)

A. atavella Ckll.

Wing 6.2 mm. long; at level of end of discal cell, first posterior not much wider than submarginal (as in *Homalomyia*)

A. inanimata Scudd.

In all these American fossils the upper apical corner of the discal cell is practically a right angle, as in *Lasiops* and *Homalomyia*; in the three species described as *Anthomyia* by Heer from Europe (Radoboj) this angle is very acute, as in *Hammonymia* and *Hydrophoria*. Is it possible that this difference distinguishes the American and Palaearctic Anthomyiidae of mid-tertiary times, one set of genera having evolved during the Eocene or earlier in America, the other in the Old World? To-day, of course, the two series are inextricably mixed in the northern faunae.